

1. A method of marking a substrate with a computer-readable code,
2 comprising the steps of:

- 4 a) providing a description of the computer-readable code;
- 6 b) heating a localized region of the substrate with a laser to form a melt pool;
- c) feeding material into the melt pool so as to create a material deposit; and
- d) advancing to different localized regions of the substrate until the code is formed using the deposited material in accordance with the description.

2. The method of claim 1, wherein the step of feeding the material includes
2 feeding a powder, a wire, or a tape.

2. The method of claim 1, wherein the substrate is moved while the laser and
2 material feed means remain stationary.

2. The method of claim 1, wherein the laser and material feed are moved
2 while the substrate remains stationary.

2. The method of claim 1, wherein the substrate and deposited material are
2 metallic.

2. The method of claim 1, further including the step of optically monitoring
2 and automatically controlling at least one physical dimension of the deposited material in
accordance with the description of the code.

2. The method of claim 6, wherein the dimension includes the height of the
2 material deposit.

2. The method of claim 6, wherein machine-readable code is a three-
2 dimensional code which takes the height of the material deposit into account.

9. The method of claim 1, wherein material deposit is a type of steel.
10. The method of claim 1, wherein material deposit is a nickel-based super
2 alloy.
11. The method of claim 1, wherein material deposit is composed of
2 aluminum, titanium, or an alloy thereof.